



US006052279A

United States Patent [19]

Friend et al.

[11] Patent Number: **6,052,279**
[45] Date of Patent: **Apr. 18, 2000**

[54] CUSTOMIZABLE HAND-HELD COMPUTER

5,801,918 9/1998 Ahearn et al. 361/683

[75] Inventors: **Steven Darren Friend**, Felton; **Dennis Silva**, San Jose; **Kurt A. Kordes**, Pleasanton, all of Calif.

Primary Examiner—Richard A. Hjerpe
Assistant Examiner—Benjamin D. Bowers
Attorney, Agent, or Firm—Suiter & Associates

[73] Assignee: **Intermec IP Corp.**, Woodland Hills, Calif.

[57] ABSTRACT

A customizable hand-held data terminal system employs multiple housing bases able to accommodate different components allow the manufacture of hand-held data terminals with a variety of features based on a single design. Because the system according to the present invention does not require the external mounting of components, the ergonomics and basic footprint of the unit remains unaltered. The present system also alleviates problems with moisture resistance, shielding, and survivability under harsh treatment associated with terminals employing externally mounted end cap modules or pod. The present invention employs a plurality of different sized base units which can accommodate a variety of different components and configurations, and wherein the different base units are interchangeable with a single upper surface and user interface comprising a display screen and keypad.

[21] Appl. No.: **08/984,323**

[22] Filed: **Dec. 3, 1997**

Related U.S. Application Data

[60] Provisional application No. 60/031,853, Dec. 5, 1996.

[51] Int. Cl.⁷ **H05K 5/00**; H05K 7/16

[52] U.S. Cl. **361/686**; 361/680; 361/681;
361/731; 361/725

[58] Field of Search 345/156; 361/679,
361/680, 681, 686, 725, 730, 731; 364/708.1

[56] References Cited

U.S. PATENT DOCUMENTS

5,617,343 4/1997 Danielson et al. 364/707

9 Claims, 3 Drawing Sheets

